

I claim:

1. A sensor for measuring position and orientation of an object, comprising:
  - a camera;
  - a lens;
  - a first feature of an alignment target;
  - a second feature of an alignment target;whereby the relative position and size of the first feature and second feature in the camera image are interpreted to measure up to three orthogonal positions and up to three orthogonal orientations of said alignment target with respect to said camera.
2. The sensor of claim 1 further including a monitor.
3. The sensor of claim 1 further including a computer.